Commonwealth of Pennsylvania
DEPARTMENT OF PUBLIC INSTRUCTION
Harrisburg

Manual of Instruction

COURSE 21

HOME VEGETABLE GARDENING

Food Production War Training Program

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Prepared under the authority of the State Board for Vocational Education by the Department of Agricultural Education, The Pennsylvania State College

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PREFACE

Course 21, Home Vegetable Gardening, is one of a series of courses which have been prepared in the "Food for Victory" program. The objective has been to set forth in brief form the phases of family food production considered pertinent to the immediate problem of Home Vegetable Gardening in Pennsylvania.

This manual is organized into five sections:

I. SUGGESTED COURSE CALENDAR
II. INTRODUCTION
III. SUGGESTED LESSON OUTLINES
IV. SUGGESTED REFERENCE MATERIAL
    Books (A)
    Bulletins, Leaflets, and Circulars (B)
    Visual Aids (C)
V. SUGGESTED APPROVED PRACTICES WHICH SHOULD DEVELOP FROM THE COURSE

The manual was prepared by Russell B. Dickerson, Itinerant Teacher-Trainer, Specialist in Young and Adult Farmer Instruction, Department of Agricultural Education, The Pennsylvania State College. The preparation was directed by H. C. Fetterolf, Chief, Agricultural Education, State Department of Public Instruction; and Henry S. Brunner, Head, Department of Agricultural Education, The Pennsylvania State College.

Special recognition is given to Dr. Warren B. Mack, Head, Department of Horticulture, The Pennsylvania State College, for invaluable assistance and guidance in setting up the suggested lesson outlines and in deciding upon the most current references pertinent to "Home Vegetable Gardening."

I. SUGGESTED COURSE CALENDAR

Lesson Number	Name of Job	Date of Meeting
1.	Understanding the Importance of the Home Vegetable Garden in War-Time	
2.	Locating and Planning the Home Vegetable Garden	
3.	Securing Seeds and Plants for the Home Vegetable Garden	
4.	Preparing and Improving Home Vegetable Garden Soils	
5.	Using Manure, Fertilizer, and Lime in the Home Vegetable Garden	
6.	Planting the Home Vegetable Garden	
7.	Following Recommended Cultural Practices in the Home Vegetable Garden	
8.	Preventing and Controlling Pests in the Home Vegetable Garden	
9.	Harvesting Vegetables For Family Use	
10.	Storing Vegetables For Winter Use	

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II. INTRODUCTION

This manual was prepared as a guide to teachers and supervisors in conducting instruction with young and adult farmers in the OSYA "Food for Victory" program. It is designed to facilitate more effective preparation by the teachers undertaking to meet the emergency need through commodity courses.

The ten (10) suggested lesson topics or jobs were selected after careful analysis of the home vegetable gardening enterprise, in conference with Dr. Warren B. Mack. The lesson outlines are purely suggestive and it is expected that each lesson will be modified to meet local conditions.

In many instances jobs other than the ten included herein will be considered important enough in certain sections of the commonwealth to be included along with, or instead of, some of those listed. It is expected also that more than one meeting will be necessary to give satisfactory instruction in some jobs.

The aims and the topics for study and discussion set up in each of the ten lesson outlines are considered applicable to the respective jobs but they are by no means considered all-inclusive. If any or all of the suggested topics for study are incorporated into a similar course of study the suggested references will be found helpful to the busy teacher. They are offered for the express purpose of bringing teacher efficiency to its best.

The reference materials suggested on pp. 16-18 are considered pertinent to the immediate problem of Home Vegetable Gardening. It is advised that at least one copy of each should be available for easy reference. It is assumed that a variety of references that are pertinent to Home Vegetable Gardening are already on hand in most schools. They will probably include texts, bulletins, charts, film strips and others, and they may furnish a large part of the reference material needed. It is important however, to use the most current references for approved practices in meeting emergency problems. The bulletins and Circulars of The Pennsylvania Agricultural Experiment Station and of The Agricultural Extension Service are prepared for Pennsylvania conditions and they are generally the most reliable sources available.

For the convenience of the teacher, the suggested reference materials on pp. 16-18 are given by key designation as follows: Books (A), Bulletins and Circulars (B), and Visual Aids (C). In preparing a lesson on any one job, the teacher will find specific references to the different problems suggested. For example, (1) if the reference is A-1, p. 7, it refers to material on page 7 of the first book listed, the material found there is considered pertinent to the topic sug-

gested; (2) if the reference is B-3, it refers to bulletin No. 3 on the list and implies that the content of the entire bulletin is pertinent to the topic; (3) if C-6 is given as a reference it will refer to item No. 6 in the Visual Aids List.

The suggested approved practices which should develop from the course are set forth on p. 19 as guides to the teacher. During each lesson certain conclusions should be reached which should result in the adoption of approved practices by individual gardeners. These will constitute the basis for the program of follow-up instruction.

For a detailed analysis of similar teaching jobs, particularly as they apply to large scale gardening, teachers are referred to "Manual of Instruction, Course 14, Increasing Vegetable Production (Commercial)".[1] It is advised that many of the references listed for Course 14 may be applicable to the several topics for study and discussion in Course 21.

Teachers who plan to organize and conduct a course in Home Vegetable Gardening are urged to follow the suggestions given in another manual of instruction in the series entitled, "Suggestions to Teachers and Supervisors for the Development and Conduct of Agricultural Commodity Courses".[2]

The suggestions set forth in that manual were prepared for the purpose of aiding individuals in organizing and conducting Agricultural Commodity Courses in the Food Production War Training Program. The manual includes the following sections:

I. Objectives of Courses in the Increased Production of Farm Commodities.
II. Things to Do Before Organizing a Commodity Course.
III. Form for Surveying Out-of-School Rural and Non-rural Persons.
IV. Suggested Teacher Preparation.
V. A Suggested Teaching Plan Using the Conference Procedure.
VI. The Importance of Current References.
VII. Providing Follow-up of Instruction.

[1] Food Production War Training Program, State Department of Public Instruction, Harrisburg, Pennsylvania.

[2] Ibid.

III. SUGGESTED LESSON OUTLINES

JOB 1. UNDERSTANDING THE IMPORTANCE OF THE HOME VEGETABLE GARDEN IN WAR-TIME

A. Teaching aims—To develop the ability of the gardener—
   1. To meet the needs for home produced vegetables.
   2. To produce adequate quantities of vegetables.
   3. To produce vegetables economically.

B. References for this lesson—(see key list on pp. 16-18)
   1. (A)—1
   2. (B)—1, 12, 13, 14, 15, 38
   3. (C)—1

C. Suggested topics for study and discussion—
   1. Analyzing the need for a home vegetable garden. B-1; B-12; B-13; B-14; B-15; C-1.
      a. To help win the war
      b. To insure a proper diet and good health for the family
      c. To insure against scarcity
      d. To release transportation facilities
      e. To release man-power for other work
      f. To save rubber, gas, and time spent in going to market
      g. To release more money for necessities, for war stamps and bonds
   2. Discovering the place of vegetables in the family diet. A-1, p.3-5; B-12, p.1.
      a. Source of low cost food
      b. Source of fresh food
      c. Source of vitamins
   3. Deciding upon other values of the home vegetable garden. B-12, p.1.
      a. Source of recreation and exercise
      b. Source of an appreciation of the value of fresh vegetables in the family diet
      c. Source of an understanding of the necessity of training the younger members of the family to work with growing things and shoulder their part of the responsibility for the family food supply.
      d. Working in a good garden is definitely war work
      e. Gardening takes less time than shopping

JOB 2. LOCATING AND PLANNING THE HOME VEGETABLE GARDEN

A. Teaching aims—To develop the ability of the gardener—
   1. To locate the garden with respect to careful consideration of soil, drainage, slope, size, fencing, and surroundings.
   2. To plan the garden so as to provide an adequate supply of fresh vegetables throughout the season as well as for canning, freezing, drying, and storing.

B. References for this lesson—(see key list on pp. 16-18)
   1. (A)—1, 2
   2. (B)—1, 3, 12, 13, 38, 39, 40, 41, 42, 53
   3. (C)—

C. Suggested topics for study and discussion —
   1. Selecting the site. A-1, p.7-8; B-1, p.1
      a. When to plant. A-1, p.6-7; B-1, p.2
      b. What to plant. A-1, p.6; B-1, p.2-3
      c. How to plant. B-1, p.3
      d. Accessibility
   2. Considering soil types adapted to vegetable production. A-2, p.13
      a. Sandy soils
      b. Silt and clay loams
      c. Muck soils
   3. Appraising the soil. A-2, p.14
      a. Texture and structure
      b. Presence or absence of organic matter
      c. Nutrients available
      d. Nature and condition of the subsoil
      e. Depth
      f. Drainage
   4. Making a garden plan. A-1, p.11-13; B-1, p.3-5; B-3
      a. Straight rows
      b. Intercropping
      c. Succession cropping
      d. Companion cropping
      e. Plan for crops that may be harvested in late season for storage and/or processing. B-53, p.8

JOB 3. SECURING SEEDS AND PLANTS FOR THE HOME VEGETABLE GARDEN

A. Teaching aims—To develop the ability of the gardener—
   1. To select seeds of vegetable varieties that are adapted, desirable, and true-to-name.
   2. To purchase disease-free seed from reliable sources.
   3. To produce and/or purchase desirable plants of adapted varieties from reliable sources.

B. References for this lesson—(see key list on pp. 16-18)
   1. (A)—1, 2
   2. (B)—1, 16
   3. (C)—2, 3, 4

C. Suggested topics for study and discussion—
   1. Considering the characteristics of good seed. A-2, p.15-18
      a. High vitality
      b. High germination
      c. Size and weight
      d. Well-bred varieties or strains—true to kind, type and variety
      e. Disease-free
      f. Kinds and varieties adapted to local season and usefulness
   2. Ordering seed. A-1, p.13-16; B-1, p.6-7; B-16; C-2; C-3; C-4
      a. Obtain the best from reliable sources with respect to freedom from disease, viability, and trueness to variety
   3. Buying plants
      a. Stocky, short and hardy plants with a large, well-developed root system
   4. Growing early plants. A-1, p.27-38; B-1, p.7-13
      a. Providing the necessary equipment — hot beds, cold frames, flats
      b. Making and operating hotbeds and cold frames
      c. Preparing plant growing soil
      d. Planting seeds and caring for the plants

JOB 4. PREPARING AND IMPROVING HOME VEGETABLE GARDEN SOILS

A. Teaching aims—To develop the ability of the gardener—
   1. To increase yields of vegetables by practicing careful and thorough preparation of the soil
   2. To improve garden soils with respect to texture, drainage, and organic matter.

B. References for this lesson—(see key list on pp. 16-18)
   1. (A)—1, 2, 3, 6, 9
   2. (B)—1, 38
   3. (C)—10, 21, 22

C. Suggested topics for study and discussion—
   1. Providing the necessary tools and equipment. A-1, p.8-10; B-1, p.13-14.
   2. Preparing the soil. A-1, p.16-18; B-1, p.14-15; A-2, p.115-120.
      a. Timeliness and depth are important
      b. Choice of tools and equipment is important
         (1) Spade
         (2) Shovel
         (3) Plow
         (4) Harrows and rake
      c. Adapt soil preparation to the crop, season, type of soil, and texture and structure of the soil.
   3. Improving the soil. A-1, p.18-19; B-1, p.15-17.
      a. Lime to improve the structure of heavy clay soils
      b. Drain to eliminate excess water
      c. Organic matter
         (1) An abundance of soil organic matter is important. A-2, p.73-76; A-6, p.347-360; A-6, p.929-939.
         (2) Beneficial effects are numerous—
            (a) Increases the absorptive capacity
            (b) Improves the physical condition
            (c) Stimulates biochemical activity
            (d) Supplies nutrients
         (3) Supplying organic matter. A-3, Ch.13; A-6, p.462-468.
      d. Sand and/or ashes to loosen heavy soils

JOB 5. USING MANURES, FERTILIZERS, AND LIME IN THE HOME VEGETABLE GARDEN

A. Teaching aims—To develop the ability of the gardener—
   1. To meet the soil fertility requirements of vegetables.
   2. To apply manures, fertilizers, and lime for maximum and efficient vegetable production.

B. References for this lesson—(see key list on pp. 16-18)
   1. (A)—1, 2, 3, 6, 9
   2. (B)—1, 4, 5, 17, 18, 38
   3. (C)—5, 6, 7, 8, 9, 10, 21, 22

C. Suggested topics for study and discussion—
   1. Supplying animal manures. A-1, p.21-23; B-1, p.17-18; A-2, p.76-80; A-3, p.215-219; A-6, p.445-461.
      a. Composition of manure from different animals
      b. Reinforcing manure
      c. Characteristics of manure
      d. Care of manure
      e. Composting manure
      f. Applying manure
         (1) Time of application
         (2) Methods of application
         (3) Quantities to apply
   2. Growing cover-crops for green manure. B-4; B-5; A-6, p.431-444; A-2, p.80-91; A-3, p.148-152.
      a. Effects of green manure
      b. Choice of green manure crops
         (1) Leguminous crops
         (2) Non-leguminous crops
            (a) Domestic rye grass. B-5.
         (3) Weeds as green manure
         (4) Crop residue as green manure
   3. Supplying commercial fertilizers. A-1, p.21-25; B-1, p.18; A-5, Chs. 1 and 6.

a. The functions of fertilizers. A-2, p.95-97; A-6, p.493-506
   (1) Using nitrogen. A-2, p.97; A-3, Ch.21; A-6, p.361-376
   (2) Using phosphorus. A-2, p.99; A-3, Ch.22; A-6, p.377-396
   (3) Using potassium. A-2, p.100; A-3, Ch.23; A-6, p.397-405
   (4) Using other fertilizing elements. A-2, p.101
   (5) Using lime. A-2, p.92; A-3, Ch.17; A-2, p.508; A-6, p.563-580
b. Nitrogen carriers. A-2, p.102
c. Phosphorus carriers. A-2, p.104
d. Potassium carriers. A-2, p.104
e. Complete fertilizers. A-2, p.105; A-3, Ch.24; A-6, p.522-545
f. Forms of lime. A-2, p.94; A-3, p.237-245
g. Fertilizing vegetable crops. B-17; A-3, p.326; A-6, p.773-776; A-2, p.508; A-6, p.469-486
   (1) Miscellaneous fruit and seed bearing crops
   (2) Leafy crops
   (3) Root crops
   (4) Bulb crops
   (5) Perennial crops
h. Acidity tolerance of vegetable crops. A-2, p.93; A-3, p.197
   (1) Sample and test the soil
i. Applying fertilizers. A-2, p.108-112; A-3, Ch.26; A-6, p.546-562
   (1) Amounts
   (2) Time
   (3) Methods of application
      (a) Broadcast
      (b) Spaded or plowed under
      (c) Row
      (d) Band
      (e) Liquid. A-1, p.23-25; B-18
j. Applying lime. A-1, p.25-26; A-2, p.95; A-3, p.245-252
   (1) Amounts—time—methods

JOB 6. PLANTING THE HOME VEGETABLE GARDEN

A. Teaching aims—To develop the ability of the gardener—
   1. To plant vegetable seeds in accordance with approved practices.
   2. To transplant vegetable plants in accordance with approved practices.

B. References for this lesson—(see key list on pp. 16-18)
   1. (A)—1, 2, 9
   2. (B)—1, 38
   3. (C)—

C. Suggested topics for study and discussion—
   1. Providing the necessary tools and equipment
   2. Leveling and firming the surface soil. A-1,p.38-45;B-1,p.18-23.
   3. Marking out and making rows. A-1, p.38-45; B-1, p.18-23.
   4. Planting seeds.
      a. Requirements for germination. A-2, p.120-122.
         (1) Oxygen
         (2) Proper temperature
         (3) Moisture
      b. When to plant. A-2, p.122
      c. Quantity of seed to sow. A-2, p.123
      d. Depth to sow. A-2, p.123
      e. Methods of planting. A-2, p.124-127
      f. Covering the seed and firming the soil. A-2, p.127
   5. Transplanting plants. A-2, p.127-132
      a. Reasons for transplanting
      b. Severity of transplanting
      c. Preparing plants for transplanting
      d. When to transplant
      e. Depth to transplant

JOB 7. FOLLOWING RECOMMENDED CULTURAL PRACTICES IN THE HOME VEGETABLE GARDEN

A. Teaching aims—To develop the ability of the gardener
   1. To control weeds and conserve soil moisture through careful and thorough tillage practices.
   2. To cultivate the garden in accordance with recommended practices for the different vegetable crops.

B. References for this lesson—(see key list on pp. 16-18)
   1. (A)—1, 2, 8, 9
   2. (B)—1, 6, 19, 20, 21, 22, 23, 24, 25, 26, 27, 38, 39, 40, 41
   3. (C)—11

C. Suggested topics for study and discussion—
   1. Providing the necessary tools and equipment
   2. Cultivating—hoeing, and weeding. A-1, p.38-45; B-1, p.23-24; B-6
      a. Necessity of weed control
      b. Effects of loosening the soil
      c. Time and frequency of cultivating
      d. Depth to cultivate
   3. Thinning plants
   4. Irrigating
   5. Mulching to control weeds and conserve moisture
   6. Following proper cultural practices for specific vegetables. A-1, p.87-232; A-2, Chs.13-23
      a. Growing cole crops. A-2, Ch.13; B-19
         (1) Cabbage (3) Broccoli (5) Kohlrabi
         (2) Cauliflower (4) Brussels Sprouts (6) Chinese Cabbage
      b. Growing salad crops. A-2, Ch.14; B-20; A-9, Ch.4
         (1) Celery (2) Lettuce (3) Parsley (4) Endive
      c. Growing tomatoes, peppers, and egg plant—A-2, Ch.15; B-25; B-26 (1) Tomatoes. A-8.
      d. Growing bulb crops. A-2, Ch.16 (1) Onions
      e. Growing greens. A-2, Ch.17; A-9, Ch.3
         (1) Spinach. (2) Chard
      f. Growing root vegetables. A-2, Ch.18; B-22; B-23
         (1) Carrots (3) Parsnips (5) Radish
         (2) Beets (4) Turnips (6) Salsify
      g. Growing perennial vegetable crops. A-2, Ch.19; B-24.
         (1) Asparagus. (2) Rhubarb
      h. Growing peas and beans. A-2, Ch.20
      i. Growing potatoes. A-1, Ch.21; B-39
      j. Growing sweet corn. A-1, Ch.22
      k. Growing cucurbits. A-1, Ch.23; B-27
      l. Growing edible soybeans. B-40; B-41; B-42

JOB 8. PREVENTING AND CONTROLLING PESTS IN THE HOME VEGETABLE GARDEN

A. Teaching aims—To develop the ability of the gardener—
   1. To prevent and/or control insects attacking vegetable crops.
   2. To prevent and/or control diseases affecting vegetable crops.
   3. To prevent and/or control rodents attacking vegetable crops.

B. Reference for this lesson—(see key list on pp. 16-18)
   1. (A)—1, 2, 4, 9
   2. (B)—7, 8, 9, 10, 28, 29, 30, 31, 32
   3. (C)—12, 13, 14, 15, 16, 17, 18, 19, 20

C. Suggested topics for study and discussion—
   1. Providing the necessary equipment.
      a. Spraying equipment
      b. Dusting equipment
      c. Plant protectors
   2. Preventing insect attacks. B-7; A-2, Ch. 10.
      a. Clean gardening practices
      b. Crop rotation
      c. Other details
   3. Controlling insects attacking vegetable crops. B-7; B-8; A-2, Ch. 10; A-1, p. 54-18; A-4, Ch. 11, 12, 13.
      a. Chewing insects
      b. Sucking insects
   4. Preventing diseases. B-9; A-1, p. 79-81; A-2, Ch. 10.
      a. Disease-preventing cultural practices
      b. Disease-resistant varieties
      c. Disease-free seed
      d. Seed treatment
      e. Spraying and/or dusting
   5. Controlling diseases of vegetable crops. B-10; A-1, p. 82-84; A-2, Ch. 10.
      a. Symptoms and control measures
   6. Preventing and controlling rodents in the garden. A-1, p. 78-79.

JOB 9. HARVESTING VEGETABLES FOR FAMILY USE

A. Teaching aims—To develop the ability of the gardener—
   1. To harvest vegetable crops for maximum yields of high quality produce.
   2. To use approved methods of harvesting and handling vegetable crops.

B. References for this lesson—(see key list on pp. 16-18)
   1. (A)—1, 2, 9
   2. (B)—1, 3, 33, 34, 35, 36, 37
   3. (C)—

C. Suggested topics for study and discussion—
   1. Harvesting vegetables for quality. B-1, p. 27-31; B-33, p. 3; B-34, p. 44; B-35, B-36, p. 3; see also references for specific crops.
      a. Timeliness is essential
         (1) Minimum lapse of time between picking and using
      b. Conservation of quality characteristics
         (1) Optimum stage of maturity
         (2) Color
         (3) Flavor
         (4) Vitamin content
         (5) Firm and fresh
            (a) Free from blemish, wilt, and contamination
      c. Grade for size and quality. B-37.
   2. Picking and handling for immediate consumption.
   3. Picking and handling for canning.
   4. Picking and handling for freezing.
   5. Picking and handling for drying.
   6. Picking and handling for winter storage.

JOB 10. STORING VEGETABLES FOR WINTER USE

A. Teaching aims—To develop the ability of the gardener—
   1. To provide adequate storage facilities for the family garden produce.
   2. To store vegetable crops for optimum quality product when needed for family use.

B. References for this lesson—(see key list on pp. 16-18)
   1. (A)—1, 2, 7
   2. (B)—11, 33, 34, 35, 36, 37, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54. (see also references for specific crops)
   3. (C)—

C. Suggested topics for study and discussion—
   1. Providing storage facilities. A-2, Ch. 12; B-11; A-1, p. 45-49; B-52; B-53; B-54.
      a. House cellar
      b. Pits, mounds, and trenches
      c. Cold frames
      d. Bank storage cellars
      e. Common storage houses
      f. Cold storage
   2. Selecting and preparing vegetables for storage. B-11; A-1, p. 49-54.
      a. Condition of the crop. A-2, p. 206-207.
      b. Managing the storage. A-2, p. 204-206.
   3. Canning vegetables. B-33; B-42; B-43; B-44; B-45; B-46; A-7, Unit C.
   4. Freezing vegetables. B-34; B-35; B-47; A-7, Unit B.
   5. Drying vegetables. B-36; B-50; B-48; B-49; A-7, Unit D.
   6. Storing vegetable seeds. B-51.

IV. SUGGESTED REFERENCE MATERIAL

Books (A)

1. Nissley, Home Vegetable Gardening. Rutgers Univ. Press, New Brunswick, N. J. 1942.
2. Watts and Watts, The Vegetable Growing Business. Orange Judd Pub. Co., N. Y. 1940.
3. Bear, Soils and Fertilizers. J. Wiley & Sons, Inc., N. Y. 1942.
4. Peairs, Insect Pests of Farm, Garden, and Orchard. J. Wiley & Sons, Inc., N. Y. 1941.
5. The American Society of Agronomy and the National Fertilizer Assn., Hunger Signs In Crops. Washington, D. C.
6. USDA, Soils And Men. Yearbook of Agriculture, 1938.
7. Duncan, Food Processing. Turner E. Smith & Co., Atlanta, Ga.
8. Work, The Tomato. Orange Judd Pub. Co., N. Y. 1942.
9. Blair, The Food Garden. The Macmillan Co., N. Y. 1942.

Bulletins and Circulars (B)

1. The Family Vegetable Garden. Cir. 120, The P.S.C.
2. Plan The Vegetable Garden. Leaflet 73, The P.S.C.
3. How To Grow Disease-free Vegetable Plants. Leaflet 90, The P.S.C.
4. Cover-Crops For Farm, Orchard, and Garden. Leaflet 53-Revised, The P.S.C.
5. Domestic Rye Grass as a Winter Cover-Crop. L. 72, The P.S.C.
6. Summer Care of the Vegetable Garden. Leaflet 98, The P.S.C.
7. Insects Attacking Vegetables. Cir. 122, The P.S.C.
8. Control of Vegetable Insects in the Home Garden. Cir. 246, The P.S.C.
9. Preventing Disease Losses In The Home Garden. Leaflet 94, The P.S.C.
10. Control of the Diseases of Vegetable Crops. Cir. 173, The P.S.C.
11. Storing Vegetables. Leaflet 84, The P.S.C.
12. The Farm Garden. F.B. 1673, U.S.D.A.
13. The City Home Garden. F.B. 1044, U.S.D.A.
14. The Vegetable Situation (1944 Outlook Material). Bu. of Agrl. Ec., U.S.D.A.
15. The Agricultural Situation. Bu. of Agrl. Ec., U.S.D.A.
16. Vegetable Varieties for Pennsylvania. Leaflet 60, The P.S.C.
17. Fertilizer and Quality Vegetable Crops. Reprint—American Potash Institute, Inc., 1155-16th Street, N.W., Wash., D. C.

18. Growing Vegetables With Fertilizer in Water. Bul. 694, N. J. Agrl. Exp. Sta., New Brunswick.
19. Cabbage, Cauliflower, Sprouting Broccoli and Brussels Sprouts. Leaflet 29-Revised, The P.S.C.
20. Celery, Lettuce, Spinach and Chinese or Celery Cabbage. Leaflet 33-Revised, The P.S.C.
21. Onion Culture. F.B. 354, U.S.D.A.
22. Production of Carrots. Leaflet 125, U.S.D.A.
23. The Culture of Table Beets. Leaflet 127, U.S.D.A.
24. Asparagus and Rhubarb. Leaflet 32-Revised, The P.S.C.
25. Production of Eggplant. Leaflet 131, U.S.D.A.
26. Production of Peppers. Leaflet 140, U.S.D.A.
27. Cucumbers, Melons, Pumpkins, and Squashes. Leaflet 30-Revised, The P.S.C.
28. Diseases and Insects of Garden Vegetables. F.B. 1371, U.S.D.A.
29. Vegetable Seed Treatments. F.B. 1862, U.S.D.A.
30. Potato Diseases and Their Control. F.B. 1881, U.S.D.A.
31. The Corn Ear Worm and Its Control on Sweet Corn. Cir. 413, N. J. Agrl. Exp. Sta., New Brunswick.
32. Potato Diseases and Their Control. Cir. 218, The P.S.C.
33. Canning Fruits and Vegetables at Home. Cir. 238, The P.S.C.
34. Freezing and Storage of Foods In Freezing Cabinets and Locker Plants. Bul. 690, N. Y. Agrl. Exp. Sta., Geneva.
35. Preservation of Fruits and Vegetables in Refrigerated Food Lockers. Ext. Bul. 208, Mich. State College, Ext. Div., East Lansing.
36. Drying Fruits and Vegetables at Home. Cir. 247, The P.S.C.
37. Handbook of Pennsylvania Standards for Grading and Marketing Fruits and Vegetables. Pennsylvania Dept. of Agr., Harrisburg, Pa.
38. How To Make A Victory Garden. Union Fork and Hoe Co., Columbus, Ohio.
39. Potato Culture in Pennsylvania. Cir. 167, The P.S.C.
40. Eighteen Varieties of Edible Soybeans. Bul. 453, Univ. of Illinois, Agrl. Exp. Sta., Urbana.
41. Soybean Production in Illinois. Bul. 310, same source as 40.
42. Soybeans and Soybean Products as Food. Misc. Pub. 534, U.S.D.A.
43. Home Canning Guide, Including Freezing, Dehydrating, Brining and Winter Storage. Home Economics Institute, Westinghouse Electric and Mfg. Co., Mansfield, Ohio.
44. Wartime Canning of Fruits and Vegetables. AWI-41, Bu. of Human Nutrition and Home Economics, Agrl. Research Administration, U.S.D.A.

45. Canning Tomatoes. AWI-61, same source as 44 above.
46. Steps in Canning. Leaflet 82, The P.S.C.
47. The Home Freezing of Farm Products. Bul. 611, New York State Agrl. Exp. Sta., Geneva.
48. Drying Foods for Victory Meals. F.B., 1918, U.S.D.A.
49. Home Dehydration and Wartime Conservation of Fruits and Vegetables. Ellen H. Richards Inst., Pop. Bul. 1, The P.S.C.
50. Drying Foods at Home. Bul. 494, Agrl. Ext. Service, Univ. of Georgia, Athens.
51. Stogare of Vegetable Seeds. Leaflet 220, U.S.D.A.
52. Vegetable Storage Room. 20M-9-43, University Farm, St. Paul, Minn.
53. Winter Vegetable Storage. Cir. 530, Agrl. Ext. Ser. Univ. of Ill., Urbana.
54. Home Storage of Vegetables and Fruits. F.B. 1939, U.S.D.A.

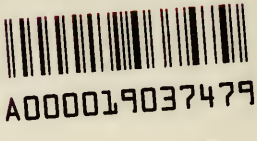
Visual Aids (C)

1. 1944 Agricultural Outlook Charts. Bu. of Agrl. Ec., U.S.D.A.
2. Vegetable Seed Catalogs from several sources.
3. Vegetable variety specimens.
4. Seed germination equipment (rag doll, dirt, blotter, etc.)
5. Pennsylvania Fertilizer Chart, Armour Fert. Wks., Balt., Md.
6. Plant-Food Utilization Chart. American Potash Institute, Inc., 1155-16th Street, N.W., Washington, D. C.
7. Samples of lime and fertilizer.
8. Sampling and Testing the Soil. Chart, Nat'l. Lime Assn., Washington., D. C.
9. Vegetables. Chart 13, The Nat'l. Fertilizer Assn., Wash., D. C.
10. Save and Reinforce Manure. Chart 5, same source as 9.
11. Samples and illustrations of tillage equipment.
12. Samples of spray and dust materials.
13. Samples of seed treaters and seed treating materials.
14. Samples and illustrations of sprayers and dusters.
15. Set of 12 Colored Picture Sheets of Important Vegetable Insects. Bu. of Entomology and Plant Quarantine, U.S.D.A.
16. Posters 49, 50, 51, 52, 53 of Cabbage and Cauliflower Diseases. U.S.D.A.
17. Posters 55 and 56 of Cucumber Diseases. U.S.D.A.
18. Posters 1 to 13 of Potato Diseases. U.S.D.A.
19. Posters 16 to 24 of Tomato Diseases. U.S.D.A.
20. Posters 25, 26, 54 and 58 of Pepper, Eggplant, Radish and Turnip, and Squash Diseases. U.S.D.A.
21. Lime Need of Soils. Eastern Half of U. S., Chart, Nat'l. Lime Assn., Washington, D. C.
22. "pH and Its Application." Chart, same source as 21.

V. SUGGESTED APPROVED PRACTICES WHICH SHOULD DEVELOP FROM THE COURSE

1. Improve the home vegetable garden to meet war-time needs.
2. Choose the most desirable location for the home garden.
3. Plan the garden to adequately meet the requirements of the home family for fresh, stored, and processed vegetables.
4. Purchase adapted varieties of disease-free vegetable seeds and plants from reliable sources.
5. Have strong, healthy plants ready for transplanting.
6. Prepare a finely pulverized, deep, and firm seed-bed.
7. Increase the productivity of the soil by improving the texture, drainage, and organic matter content.
8. Use available manures, fertilizers, and lime as effectively as possible.
9. Plant vegetable seeds and transplant vegetable plants in accordance with approved practices.
10. Control weeds and conserve soil moisture in accordance with approved tillage practices.
11. Follow the cultural practices specifically recommended for the different vegetables.
12. Prevent and/or control insects, diseases, and rodents effectively.
13. Harvest and handle vegetable crops carefully, in accordance with approved practices, for maximum yield and quality.
14. Provide the most effective storage facilities for an adequate quantity of high quality vegetables for family use.

Aaron Bldg.



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